

ORIGINAL

Before the **DOCKET FILE COPY ORIGINAL**
Federal Communications Commission
Washington, D.C. 20554

In the Matter of:

*Creation of a Low
Power Radio Service*

To: The Commission

) MM Docket No. 99-25
)
)
) RM-9208
) RM-9242

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

**COMMENTS OF WILLIS
BROADCASTING CORPORATION**

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August 2, 1999

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SUMMARY

The series of proposals contained in the *NPRM* are unsound, both technically and from a public policy standpoint. Neither the *NPRM*, nor the various petitions and comments thereon demonstrate any real need for a new low power FM service.

Many comments seemed to be nothing more than complaints or gripes about existing programming, and should be addressed, if at all, not by rule making, but by the Commission's Complaints and Investigations Branch of the Mass Media Bureau, to determine whether or not such stations are complying with the requirements of §73.3526(e)(i). Moreover, many opportunities presently exist for persons of limited means to acquire existing broadcast properties.

Implementation of the proposals will not achieve the goals the Commission says it has in mind. There can be no guarantees that particular segments of the population, such as women or minorities, would end up owning LPFM facilities, and the Commission is precluded by the Constitution from stacking the deck in their favor. Moreover, since the Commission is proposing no new community service obligations on LP1000 stations, and does not contemplate imposing any program service obligations on LP100 or Microradio stations, the alleged "unmet community needs" not being addressed now will remain unaddressed under the proposed new service. Further, exclusion of existing broadcast owners will not assure the diversity of thought and opinion will be increased, only that LPFM stations will more likely fail due to being deprived of the only persons who have expertise in operating radio facilities.

More serious problems exist with the proposals. Recent experience suggests that, by embarking on this policy, the Commission will initiate another round of proliferation and fragmentation, followed inevitably by increasing economic instability of the radio broadcast services, which will, in turn, create a need for more consolidation to remedy such fragmentation. It is difficult not to see the very striking parallels between the LPFM proposals and Docket 80-90 of twenty years ago. This

unfortunate 20-year cycle of proliferation-fragmentation-economic crisis and subsequent consolidation should be avoided.

Finally, the LPFM proposals, which are all based on overlaying the new service on top of the existing full FM service, thereby degrading that existing service, are technically unfeasible. The Commission has already made compromises in the integrity of the FM spectrum by making numerous exceptions to the channel separation standards set forth in 47 CFR §73.207. More than a possibility exists for significant and substantial interference to be caused to the reception of second and third adjacent channels of full service stations. Using the Commission's own calculations of service loss for third adjacencies, the damage to the present FM service will be real and palpable. For second adjacencies, the damage could be devastating.

Accordingly, such proposals are neither fair, nor efficient use of radio, and cannot be said to service the public interest.

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To: The Commission

**COMMENTS OF WILLIS
BROADCASTING CORPORATION**

WILLIS BROADCASTING CORPORATION ("WBC"), by Counsel, and pursuant to Section 1.415(a) of the Rules and Paragraph 115 of the above-captioned proceeding, hereby respectfully submits the following Comments to the Commission in response to the *Notice of Proposed Rule Making* released February 3, 1999.¹ In support whereof, the following is shown:

PRELIMINARY STATEMENT

1. On February 3, 1999 the Commission released a *NPRM* in this proceeding, proposing the establishment of a Low Power Radio Service in the FM Band.² The service would be established within the existing FM Band, with two classes of facilities: 1,000-Watt Primary Service ("LP1000") and 100-Watt Secondary

¹ FCC 99-6, released February 3, 1999 (hereafter, "*NPRM*").

² These proposals are hereafter referred to collectively as "LPFM."

Service ("LP100").³ In order to accommodate these new classes of station in the existing FM Band, the Commission proposed to eliminate third-channel adjacency restrictions as applied to those stations, and indicated it might be possible to disregard second-adjacent channel restrictions as well.

2. WBC is the Licensee, or 100% stockholder, of the following Radio Stations:

KDLA (AM) and KEAZ (FM)	DeRidder, Louisiana
KLPL AM-FM	Lake Providence, Louisiana
KLRG (AM)	North Little Rock, Arkansas
KLVA (AM)	Vadalia, Mississippi
KTOC AM-FM	Jonesboro, Louisiana
WBIL (AM)	Tuskegee, Alabama
WBTE (AM) and WURB (FM)	Windsor, North Carolina
WDDT (AM)	Greenville, Mississippi
WGRM AM-FM	Greenwood, Mississippi
WHLF (AM)	South Boston, Virginia
WIZK (AM)	Bay Springs, Mississippi
WJNS (FM)	Yazoo City, Mississippi
WJXN (AM)	Jackson, Mississippi
WNPT (FM)	Linden, Alabama
WPCE (AM)	Portsmouth, Virginia
WPOL (AM)	Winston-Salem, North Carolina
WSDT (AM)	Soddy-Daisy, Tennessee
WTNC (AM)	Thomasville, North Carolina
WWCA (AM)	Gary, Indiana
WWDF (AM)	Richland, Mississippi

In addition, through affiliated companies, Bishop L.E. Willis, the 100% shareholder of Willis Broadcasting Corporation, holds licenses for the following stations:

WANN (FM-CP)	Virginia Beach, Virginia
WAYE (AM)	Birmingham, Alabama
WBOK (AM)	New Orleans, Louisiana
WBXB (FM)	Edenton, North Carolina
WCRY (AM)	Fuquay-Varina, North Carolina
WELS AM-FM	Kinston, North Carolina
WGPL (AM)	Portsmouth, Virginia
WGSP (AM)	Charlotte, North Carolina
WLPH (AM)	Irondale, Alabama
WMVI (AM)	Mechanicsville, New York
WNUZ (AM)	Telledega, Alabama
WRAG (AM)	Carrolton, Alabama

³ The Commission also stated it seeks Comments from the public on the advisability of establishing a third, "Microradio" secondary FM service of facilities with Effective Radiated Power ("ERP") no greater than 10 watts. *NPRM*, ¶¶34-37.

WSFU (FM)
WSFZ (AM)
WSPZ (AM)
WSRC (AM)
WSVE (AM)
WTJH (AM)
WTSB (AM)

Union Springs, Alabama
Memphis, Tennessee
Tuscaloosa, Alabama
Durham, North Carolina
Jacksonville, Florida
East Point, Georgia
Lumberton, North Carolina

As the licensee of urban, suburban and small market commercial AM and FM radio stations, WBC has a direct and immediate interest in the Commission's proposals to establish a new low power radio service in the FM Band.

3. WBC believes that the establishment of such services would be a mistake, both from a public policy standpoint as well as from a technical standpoint, and asks the Commission to consider carefully the potentially severe adverse effects such a service will have on the existing commercial, as well as noncommercial broadcast industry.

4. WBC is 100% minority-owned.⁴ While WBC supports the Commission's mission of finding ways to increase the percentage of broadcast stations owned by minorities, it does not believe that this should be done at the expense of existing licensees of FM broadcast stations, both minority and non-minority owned.

DISCUSSION

I. CREATION OF LPFM SERVICE IS UNSOUND PUBLIC POLICY

5. The Commission cites a number of reasons for proposing the LPFM service, none of which are persuasive, and all of which are unsound. Long-established criteria for determining, from a public policy standpoint, what is in the public interest, should not be cast aside solely to appease certain political groups in this country,

⁴ WBC is 100% owned by Bishop L.E. Willis, an African-American.

particularly where such action may jeopardize the continued viability of an industry that has demonstrated effective radio service in the public interest.

A. *The Need for a New Low Power Service Has Not Been Established.*

6. In initiating the present Rule Making Proceeding, the Commission stated that its goals were (1) to address unmet needs for community-oriented radio broadcasting; (2) foster opportunities for new radio broadcast ownership; and (3) promote additional diversity in radio voices and program services. It is clear, from the text of the *NPRM*, that these goals have not really been examined carefully for current validity.

1. *The Proponents of LPFM Have Not Established that Community-Oriented Needs Are Not Being Met.*

7. Apart from self-serving statements of “unmet needs,” the proponents of LPFM have not offered any probative evidence that groups with particular and discrete viewpoints have been disenfranchised by the present system of broadcast licensing, or that the views of minorities and women are not being heard. While it cannot be denied that there exists a certain amount of popular support⁵ for the creation of a new LPFM service, such expressions do not equate to the public interest. No doubt, if the man (or woman) on the street were asked, “Would you like to have your own radio

⁵ The Commission asserts that it received over 13,000 inquiries in 1998 from individuals and groups expressing an interest in starting a low power radio station, and that the Commission’s fact sheet page on its web site is receiving more than 1,000 “hits” a day. *NPRM*, ¶11 and note 26. *But see* the dissenting Statement of Commissioner Harold W. Furchtgott-Roth, wherein he suggests that much of the popular support for LPFM may have been generated by the less-than-neutral promotion of the concept in the FCC’s web page.

station?" he (or she) would reply in the affirmative. This does not mean that there are unmet needs, or a lack of diversity of voices in the present media.⁶

8. Congress, in adopting and amending the Communications Act, never contemplated that the radio spectrum should become a soapbox for any and every citizen who believes he has something to say. To attempt to address every private desire to have one's own radio station would be hopelessly wasteful of spectrum, and in the end, self-defeating. Individual expressions of *private interest* do not equate to the *public* interest, a truth which the proponents of LPFM apparently ignore.⁷

9. Moreover, support for LPFM in the form of letters to the FCC does not mean that the needs of the public for information and diverse viewpoints on important public issues are going unmet by the present system. There has been little evidence indicating that the present system is not responsive to the problems, needs and interests of the community.⁸ And even if it could be shown, then the appropriate remedy is greater *enforcement*, not creating more radio stations.⁹

10. There are also those who point to the rise of "pirate" radio stations as additional evidence that a need for LPFM exists. Nothing could be more fallacious or

⁶ The Commission itself has acknowledged that, "[W]hile there are still fewer channels available than there are parties interested in becoming licensees..., virtually all valuable resources fit this characterization, and we do not believe that scarcity is a reliable indicator of the degree of viewpoint or programming diversity." *Amendment of Section 73.3555 of the Commission's Rules*, 4 FCC Rcd 1723, 65 RR 2d 1676, 1682 (1989).

⁷ One might do well to consider whether the *Amateur*, or *Citizens Band* Radio Services might be more appropriate vehicles to address such private and personal interests.

⁸ Responsiveness to community issues is an *obligation* imposed on *all* broadcast licensees. See 47 CFR §§73.3526(e)(11)(i), 73.3526(e)(12), and 73.3527(e)(8).

⁹ For LP100 Stations, the Commission is not even contemplating imposing public service requirements. Yet, this is the "need" that LPFM is offered up to address.

insidious as a basis for making public policy. By the same reasoning, one could justifiably argue for the legalization of heroin, cocaine and other controlled substances, and the establishment of special "community clinics" to distribute these drugs to all who ask for them. As the Commission itself has acknowledged, radio "pirates" are lawbreakers, and have demonstrated their scorn for a system of rules and regulations designed to prevent chaos in the radio spectrum.¹⁰ The existence of pirates does not prove a need for LPFM, and the creation of LPFM will not eliminate the existence of pirates. There will always be those who will choose to operate outside the law for the pursuit of personal gain or personal ego gratification.

2. Numerous Opportunities Exist Now for Broadcast Ownership

11. Adequate opportunities already exist for new broadcast owners. The significant turnover in radio ownership each year demonstrates that opportunities to acquire existing broadcast properties for reasonable, even "bargain basement" prices abound.¹¹ Moreover, not all station trading involves prices in the multiples of millions of dollars, or consolidations in larger markets. Almost any issue of BROADCASTING & CABLE, for example, shows that many properties have sold for substantially less than \$1 million.¹² To find such opportunities, all one need do is contact a media broker.

¹⁰ To its credit, the Commission is at least proposing that persons previously found to have engaged in illegal broadcasting should not be eligible to receive LPFM licenses.

¹¹ WBC has acquired many of its broadcast properties for very reasonable prices, and on excellent payment terms. As is shown below (Note 12), WBC's experience is neither unique nor exceptional.

¹² For example, the July 12, 1999 issue of BROADCASTING & CABLE listed the following AM-FM Combo proposed sales: KWUF AM-FM, Pagosa Springs, CO = \$680,000; KFIG AM-FM, Iowa Falls, Iowa = \$320,000; KFLP-AM & KFLL-FM, Floydada, TX = \$103,000; and WGLH AM and WQLA-FM, La Follette, TN = \$99. Two FM construction permits were shown as being sold for under \$200,000 each: KXIC,

12. Moreover, the spectrum, while becoming full in the commercial radio bands, is not completely utilized, particularly in those rural areas with which the Commission says it is concerned. There is room for many Class A FM allotments in the less-populated regions of this country, where "big city radio" doesn't care to go.¹³ The launching of a new radio service as an overlay on top of the existing radio service appears to be unwarranted and unjustified.

3. *The Goal of Diversity Has Long Since Been Met.*

13. Finally, the Commission and LPFM proponents cite the "goal" of diversity as justification for the creation of a new radio service. While diversity of thought and opinion was a worthy and, no doubt, necessary goal for the Commission to pursue in the 1950's, 1960's and even, perhaps, in the 1970's, by 1985, the Commission itself had concluded that the public interest in viewpoint diversity "is fully served by the multiplicity of voices in the marketplace today." *See, Inquiry into Section 73.1910 of the Commission's Rules and Regulations Concerning the General Fairness Doctrine Obligations of Broadcast Licensees, Report to Congress*, 102 FCC 2d 145 (1985) ("Report to Congress").¹⁴ Since 1985, program diversity, and new media to express it, has continued to expand at an exponential rate.

Quanah, TX = \$155,000, and KAOH, Lompoc, CA = \$140,000. Finally, a Class A FM Station in Camilla (outside of Atlanta, Georgia), WQVE, was listed as being sold for \$675,000. *Id.*, p. 56

¹³ WBC, through an affiliate, recently acquired the construction permit for WANN (FM), Virginia Beach, Virginia, a community located in the Norfolk-Portsmouth, Virginia urbanized area.

¹⁴ *See also, Fairness Doctrine Alternatives*, 2 FCC Rcd 5272 (1987), *recon.*, 3 FCC Rcd 2035 (1988), *aff'd. Syracuse Peace Council v. FCC*, 867 F.2d 654 (D.C. Cir. 1989) (eliminating the fairness doctrine as unnecessary because of the diversity of voices and opinion in broadcast and other media).

14. As the Commission noted in its *Second Report and Order in MM Docket No. 87-7*, since 1970 the number of broadcast outlets at the *local* level has increased dramatically throughout small, medium and large sized media markets. According to the FCC's findings, the top 25 markets average 13.4 over-the-air television signals, 29.8 commercial AM stations, 29.2 commercial FM stations, 41.9 programmed cable channels in use with a 44% penetration rate, 2.8 locally published or significantly read newspapers, 12 significantly-read magazines, and a VCR penetration rate of 54.1%.

15. The smaller markets also have an abundance of communications outlets. For example, the smallest media markets (market size 201-209) have about nine radio and television outlets, as well as an average access to an additional 20 cable channels. Finally, although the number of significantly read daily newspapers declines from an average 2.8 dailies in the top 25 markets to 0.7 in markets 201-209, the average number of significantly read magazines remains relatively constant at about 11 for each market group. *Second Report and Order, supra*, 65 RR 2d at 1592-93.

16. Although there has been a tremendous growth in the number of media outlets on a national basis, the fact that the smaller markets have an abundance of new sources of information demonstrates that there is substantial diversity on the local level as well. For example, 94% of the television households in the U.S. receive five or more TV signals, up from 79% in 1975.¹⁵

17. Given the growth of radio, television, cable television, VCR's, satellite master antenna systems, wireless cable services, DBS, and the computer-information

¹⁵ See, *OPP Report, supra*, at 17.

processing technologies, it would be difficult to dispute that the Commission's goal of establishing media diversity in substantially all media markets has been achieved.¹⁶

18. Finally, to address the Commission's current "chicken-in-every-pot" philosophy of broadcast service, the electronic soapbox now exists in the form of the Internet, where everyone with a computer and modem, and a few hundred dollars can create his or her own web page, and on it express any and all viewpoints, without fear of government intrusion, licensing, or regulation.¹⁷ Thus, the public interest goal of "Diversity" does not justify the creation of yet another broadcast service to meet some unsupported need for local expression.¹⁸

B. Implementation of a LPFM Service Will Not Meet the Commission's Goals, Even if Valid.

1. Increased Ownership of Broadcast Facilities by Minorities and Women Will Not Necessarily Occur.

19. As noted by Commissioner Furchtgott-Roth in his dissenting statement, even with the proposed relaxation of second- and third- adjacent channel separation requirements, few, if any LPFM stations would fit in already overcrowded urban radio markets:

For instance, in New York city, there would be no LP1000 stations and no LP100 stations, and in Los Angeles there will be only one LP1000

¹⁶ The fact that the various media may not be perfect substitutes for one another does not negate their status as competing, antagonistic sources of information for the purposes of diversity analysis.

¹⁷ The existence of "streaming" (or real time) audio, as well as video capability on the Web makes the analogy even more apt. See, "Web Radio: No Antenna Required," *Wall Street Journal*, July 28, 1999, p. B-1. What need for another audio service that creates additional interference on an already crowded band? – unless, course, the objective is to do just that: interfere with existing speech.

¹⁸ See, *Report and Order, Amendment of Section 73.3555*, 7 FCC Rcd 1723, 65 RR 2d 1676, 1682 (1989) ("[W]e do not believe that scarcity is a reliable indicator of the degree of viewpoint or programming diversity.")

station, no LP100 stations with translator protections and six LP100 stations with unprotected translators. *See Appendix D.* In addition to their small number, these services will be relatively unavailable to mobile audiences due to their low wattage.¹⁹

20. Moreover, although many proponents of LPFM, including the Chairman and Commissioner Susan Ness in their separate Statements in the *NPRM*, tout the opportunities LPFM will create for minorities and women, there is no assurance that LPFM facilities would be awarded to these groups.

21. Again, as noted by Commissioner Furchtgott-Roth, "There is simply no way that the Commission can say that, if a first-come, first-served rule is adopted, these licenses will not be awarded to whoever applies for them first or that, in the case of mutually exclusive applications, these licenses will not go to the highest bidder."²⁰

22. Rightly or wrongly, the Courts have ruled quite succinctly that any system of "preferences" based on gender or race, will not withstand Constitutional scrutiny in the absence of a compelling governmental interest. *Adarand Constructors, Inc. v. Peña*, 515 US 200 (1995); *Steele v. FCC*, 770 F.2d 1192, 58 RR 2d 1463, (DC Cir 1985), vacated, *Steele v. FCC*, No. 84-1176 (DC Cir Oct. 31, 1985) (*en banc*); *Lamprecht v. FCC*, 958 F.2d 382, 385, 70 RR 2d 658 (DC Cir 1992). The Supreme Court has also ruled that, while programming diversity may be important, it does *not* rise to the level of a "compelling governmental interest."²¹

¹⁹ *NPRM*, *supra*, dissenting statement of Commissioner Harold W. Furchtgott-Roth.

²⁰ *Id.*

²¹ *See also, Lutheran Church-Missouri Synod v. FCC*, 141 F.3d 344 (D.C. Cir. 1998) (*observing that in Metro Broadcasting, Inc. v. FCC*, 497 U.S. 547 (1990), the Court held programming diversity to be an important but not a compelling government interest).

2. The Alleged “Unmet Community Needs” Will Not Necessarily Be Addressed by LPFM Stations.

23. The Commission’s announced goal of providing opportunities for highly focused community-oriented programming will not necessarily result from the imposition of LPFM. The Commission is not proposing to impose any special program-content obligations on LPFM licensees to ensure that community-oriented issues are addressed. Instead, the Commission proposes that LP1000 stations would have the same obligations as exist for all commercial and noncommercial stations.²²

24. Moreover, under the Commission’s proposals, LP100 stations and Microradio stations, if such service is created, would have no public interest programming obligations at all.²³ Incredibly, the Commission justifies the lack of programming and other service obligations²⁴ on LP100 and Microradio stations because it believes that compliance with such rules might make it economically unfeasible to operate an LPFM station.²⁵

25. Similarly, the Commission suggests that LP100 stations need not participate in the Emergency Alert System (“EAS”) because of the relatively small coverage that an LP100 station would have.²⁶ Yet, at the same time, the minimum

²² As noted above, existing commercial and noncommercial broadcast licensees have programming obligations imposed on them to address community issues. Assuming, *arguendo*, that important community issues are not being addressed under the present system, there is nothing uniquely inherent in a lower-powered FM facility that would assure that such issues *would* be addressed by an LPFM licensee.

²³ *NPRM*, ¶172.

²⁴ *Id.*, ¶173.

²⁵ “Because of the costs of complying with Commission rules, this issue could be of importance in determining whether a small entity could afford to operate an LPFM station.” *NPRM*, Appendix E, p. 63.

²⁶ *NPRM*, ¶187.

facility Class A FM station, operating at 100 watts, has all of the program service obligations and must participate in the EAS. The same rationale would apply to this Class A station, yet the Commission does not propose to relieve any Class A FM stations from compliance with EAS. This form of discrimination raises serious questions regarding whether such proposals can withstand scrutiny under the *due process* clause of the Fifth Amendment.²⁷

3. The Creation of More Broadcast Outlets Does Not Guarantee an Increase in the Diversity of Thought and Opinion.

26. The Commission's final enunciated goal, diversity of programming, is equally incapable of effectuation through its proposed creation of a low power radio service. As noted above, in the absence of regulations unlikely to withstand Constitutional scrutiny under *Adarand, supra*, there is no assurance that any of the petitioners or those thousands of individuals who have filed comments in response to the various petitions, decrying the lack of programming for communities or minorities, would ever be awarded a permit to construct a new LPFM station. And, since LPFM stations would have either the same programming obligations as full service stations or none at all, the Commission's stated goal of diversity of programming could not be assured, either.

²⁷ At the very least, distinguishing between Class A stations, on the one hand, and LP1000 and LP100 stations on the other, when no rational basis exists for such disparate treatment, must be deemed to be unreasonable, arbitrary and capricious.

4. Exclusion of Current Broadcast Licensees from Ownership of LPFM Facilities, even if Permissible Under the Act, Would Serve Only to Eliminate Necessary Expertise in Broadcast Management that Could Help to Ensure Success.

27. The Commission's proposal to exclude all current broadcast licensees from the pool of those eligible to own and operate a LPFM station is of questionable validity under the Communications Act of 1934, as amended. While Congress authorized the Commission to promulgate regulations under the act to promote diversity of ownership, it certainly did not contemplate the systematic exclusion of an entire class of persons for no other reason than that they may have an attributable ownership interest in some commercial or noncommercial broadcast licensee *somewhere in the United States*.

28. The proposal raises serious equal protection and due process issues as well, since there exists no rational basis for such systematic exclusion. The Commission cannot point to any significant public interest benefit to be derived from such exclusion, particularly where it has decided *not* to require "local" ownership of LPFM facilities. What possible public detriment could accrue if a person who owned, *e.g.*, a 5% of a radio station in Redwood City, California, were to acquire a license for a LPFM station in Bar Harbor, Maine?

29. While the Commission can point to no *benefit* to be derived from wholesale exclusion of broadcast licensees from participating in the proposed low power radio service, it is not difficult to visualize the *adverse consequences* that will occur: The only class of persons with experience in constructing and operating radio stations are forbidden to participate in ownership in a brand new kind of service, where income potential is extremely limited. How many LPFM licensees, awarded permits

to construct and operate an LPFM station in 1999, will actually get on the air, or if they do, how long will they stay on the air before the project is abandoned for lack of income? *In short, the FCC is setting its special class of LPFM licensees up for failure.* The next question obviously follows: how serious is the FCC about promoting a new LPFM service? Holding out the promise of multiple opportunities for minorities and community groups to get into broadcasting would be a cruel hoax on these groups if these opportunities never come to pass or are structurally doomed to failure.²⁸

C. Implementation of LPFM, As Envisioned by the FCC, Will Create Economic Instability in the Broadcast Industry, Ultimately Requiring More, Not Less, Media Consolidation.

1. The Commission Has Stated Previously that the Economic Health and Stability of the Broadcast Industry is an Important Public Interest Goal.

30. It should go without saying that the mission of the Federal Communications Commission is not to preside over the demise of the broadcast industry. Yet, it appears that it must be reminded of this from time to time. The economic health and stability of the broadcast industry is a matter that has been, and should remain, of utmost importance to the FCC.

²⁸ If the Commission is genuinely concerned that a great number of voices are currently not being heard, there are certainly other and better ways to provide an outlet for their expression. As Commissioner Furchtgott-Roth stated in his dissent to the *NPRM*,

People can communicate with others by obtaining extant commercial or noncommercial licenses, the purchase of air time on broadcast properties, leased access and/or PEG cable schemes, amateur radio, e-mail, internet home pages, bulletins and flyers, and even plain old-fashioned speech. The notion that a message must be broadcast over radio spectrum before its speaker has a "voice" overlooks the realities of modern life.

NPRM, dissenting statement of Commissioner Furchtgott-Roth, p. 2.

31. Clearly, the Commission has chosen for itself a much broader role than the simple “traffic cop” metaphor that was used to justify the regulation of Broadcasting initially in 1927. From time to time, the Commission has attempted to restructure the broadcast industry when it appeared that market power was becoming concentrated in the hands of too few.

32. In 1975, for example, the Commission attempted to limit local market power by banning the ownership of broadcast facilities by publishers of daily newspapers serving substantially the same area.²⁹ While originally proposing the complete breakup of newspaper-broadcast combinations over a five-year period, the Commission adopted a policy which proscribed future newspaper-broadcast combinations, but “grandfathered” all but a handful of “egregious cases,” the owners of such co-located properties being ordered to divest.³⁰ Part of the reason for the Commission’s altered position had been the statistical evidence, submitted during the proceeding that newspaper-owned stations actually produced a larger percentage of news, public affairs, and other public service programming than did independently owned stations. In addition, the Commission also expressed the fear that a complete breakup would cause such instability in the industry as to *disserve* the public interest, convenience and necessity.³¹

33. On appeal, however, The D.C. Circuit reversed that portion of the rules which grandfathered existing combinations, and ordered the FCC to adopt a rule

²⁹ The Newspaper-Broadcast Cross-Ownership Policy (“NBCO”) was subsequently codified in 47 CFR §73.3555(c).

³⁰ *Second Report and Order* (Docket 18110), 50 FCC 2d 1046, 32 RR 2d 954 (1975).

³¹ *Id.*

requiring divestiture of all such combinations.³² Given the primary goal of the FCC to promote *diversity of thought and opinion* in its broadcast licensing decisions, the Court said that considerations such as industry stability and a past history of public service, were entitled to little weight, and that the Commission was compelled to announce a *presumption*, as a matter of law, that co-located newspaper-broadcast facilities do not serve the public interest.³³

34. The U.S. Supreme Court reversed the D.C. Circuit decision. While it upheld the constitutionality of the NBCO Policy, it agreed with the FCC that full-scale divestiture was unnecessary. The Court said that *industry stability and public service were legitimate public interest goals* which the FCC was entitled to take into account, and that the decision to make the NBCO Rules prospective in application only was permissible as a reasonable agency response to changed circumstances in the broadcasting industry.³⁴

35. The Supreme Court has more recently reaffirmed the importance of the broadcast industry's economic health in a different context. In *Turner Broadcasting System, Inc. v. FCC* 512 U.S. 622, 75 RR 2d 609 (1994), the Court reaffirmed that the economic health of the broadcast industry was an "important and substantial federal interest."³⁵

³² *National Citizens Committee for Broadcasting v. FCC*, 555 F.2d 938 (D.C. Cir. 1977).

³³ *Id.*

³⁴ *FCC v. National Citizens Committee for Broadcasting*, 436 U.S. 775 (1978).

³⁵ *Citing, Capital Cities Cable, Inc. v. Crisp*, 406 U.S. 691, 714 (1984). *See also, U.S. v. Midwest Video Corp.*, 406 U.S. 649, at 661-662, 664 (1972).

36. The Commission has also specifically addressed the importance of the economic health of the radio industry. In *Amendment of Section 73.3555 of the Commission's Rules*, 4 FCC Rcd 1723, 65 RR 2d 1676 (1989), the Commission addressed the declining economic health of AM radio, noting that the increase in number of alternative media sources had adversely affected AM radio's ability to compete. And in *Revision of Radio Rules and Policies, Multiple Ownership Rules*, 7 FCC Rcd 2725, 70 RR 2d 903 (1992), after noting the decline in the economic health of radio since 1989, the Commission stated,

[W]e conclude that radio's ability to serve the public interest in the spirit of the Communications Act is substantially threatened. The industry's ability to function in the "public interest, convenience and necessity" is fundamentally premised on its economic viability.³⁶

2. Recent History Demonstrates that the Creation of LPFM Service Will Cause Economic Instability in the Broadcast Industry.

37. For those who have been observers of FCC activity over the past twenty years, the current proposal seems strikingly familiar. Two decades ago, the Commission proposed and adopted a number of policies which proliferated the number of commercial radio frequencies, both AM and FM by a significant number. In the *Clear Channel Proceeding*,³⁷ the protection for Class I-A Clear Channels was reduced by 50% in order to permit the allocation of new regional channels and local daytime-only stations.³⁸ BC Docket 80-90, proposed by the Ferris administration but implemented

³⁶ 70 RR 2d at 906.

³⁷ *In re Clear Channel Broadcasting in the AM Broadcast Band*, 78 FCC 2d 1345, 47 RR 2d 1099 (1980).

³⁸ Fortunately, the FCC under Chairman Fowler, rejected the 9 kiloHertz spacing proposal for AM radio seriously advocated by his predecessor, Charles Ferris, as a means of fostering ownership opportunities for minorities. Like the current LPFM

by subsequent administrations, added over 700 new FM channels, most of them lower-powered Class A local channels, throughout the country over a three-year period.³⁹ These, and a number of other regulatory moves, all adopted under the philosophy that "More is Better," created a plethora of new audio broadcast services during the 1980's.

38. During this period of phenomenal growth in electronic media, the bubble continued to expand. Prices paid for radio and television stations rose well beyond what could be supported by their cash flows, with the purchasers and their financing partners both believing that profitable returns on investments would be achieved by resale after further increases in valuation.

39. At the end of the decade, the bubble inevitably burst, and a period of phenomenal growth was followed by plummeting of station values, cash flows, and the consequent business failures and bankruptcies. Commercial radio stations were particularly hard hit. Some media brokers estimated that radio station values had declined by as much as 50% in two short years. By 1991, more than half of all commercial radio stations were operating in the red,⁴⁰ and for small market stations

proposals, 9 kiloHertz spacing had the potential for causing massive interference to existing AM stations, who were already suffering from overcrowding on the dial and the increase of man-made "noise."

³⁹ *In re Modification of FM Broadcast Rules to Increase Availability of Commercial FM Broadcast Assignments*, 48 Fed. Reg. 29,486, 53 RR 2d 1550 (1983).

⁴⁰ *Revision of Radio Rules and Policies*, 7 FCC Rcd 2755, ¶12, 70 RR 2nd 903, 905 (1992), *recon. granted in part*, 7 FCC Rcd 6387, 71 RR 2d 227 (1992).

the percentage was even higher.⁴¹ Many AM stations, and a number of small market FM's had simply gone dark or their owners had declared bankruptcy.⁴²

40. The Commission, seeing that it was presiding over an industry in serious economic trouble, came to realize that its "More is Better" and "Diversity at Any Cost" policies, like most panaceas, worked much better in theory than in practice. Even before the turn of the decade, the Commission had begun to realize that its system of mixing allocations of regional and local stations had created an economic imbalance making it difficult for the lower-powered stations to compete.

41. A number of policy initiatives were undertaken to address these imbalances in order to permit small AM and FM stations to compete more effectively in the media marketplace. Examples include a blanket rule making proceeding directing that most Class A FM stations increase their effective radiated power from 3 kW to 6 kW or equivalent,⁴³ relaxation of *Ashbacker* requirements in rule making proceedings to upgrade on existing or adjacent FM Channel,⁴⁴ and modification of the

⁴¹ [A]s a direct result of this tremendous market fragmentation, many participants in the radio business are experiencing serious economic stress. More than half of all commercial radio stations lost money in 1990, and small stations in particular have been operating near the margin for years.

Id., 70 RR 2d at 905.

⁴² In its 1992 *Report and Order*, the Commission noted that over 300 stations were currently silent. and that over half of those had ceased operating within the last 12 months. *Id.*, 70 RR 2d at 906.

⁴³ *In re Amendment of Part 73 of the Rules to Provide for an Additional FM Station Class (Class C3) and to Increase the Maximum Transmitting Power for Class A FM Stations, (Second Report & Order)*, 4 FCC Rcd. 6375, 66 RR 2d 1473 (1989).

⁴⁴ *In re Amendment of the Commission's Rules Regarding Modification of FM Broadcast Licenses to Higher Class Co-channel or Adjacent Channels*, 51 Fed. Reg. 20,290, 60 RR 2d 114 (1986).

One-to-a-Market Rule⁴⁵ to permit TV-AM combinations. *Each of these measures was adopted, in whole or in part, as a means of addressing the economic instabilities caused by the expansionist policies of the early 1980's typified by Docket 80-90.* But while they brought some relief to a few broadcasters, economic imbalances and competitive disadvantages remained.

42. In late 1990, the Mass Media Bureau had begun responding to the economic crisis by issuing declaratory rulings on the legality of joint operating agreements between two radio stations in the same market. and attendant FCC policies.⁴⁶

43. Beginning with the *Russo*⁴⁷ letter ruling, however, the Bureau took the position that, so long as each licensee remained in control of its own programming, personnel and financial affairs, no issue of unauthorized transfer of control was raised.⁴⁸ While attempts were made in these rulings to distinguish earlier Commission policy which had banned similar arrangements, it seems clear that the Bureau, aware of the growing economic crisis, was attempting to respond, with the limited delegated

⁴⁵ *In re Amendment of Section 73.3555 of the Rules*, 4 FCC Rcd. 1723, 65 RR 2d 1676 (1988).

⁴⁶ Until a ruling by the Bureau at the end of 1990, it was widely assumed that time brokerage agreements, which provided for the brokering of a substantial portion of a station's time, would violate Section 310(d) of the Communications Act. *See, Phoenix Broadcasting Co. (KPHX)*, 44 FCC 2d 838, 29 RR 2d 187, 188-89 (1973); *see also, Fine Arts Broadcasting, Inc. (WEZL)* 57 FCC 2d 108, 111, 35 RR 2d 1169 (1975).

⁴⁷ *Roy R. Russo, Esquire*, (Letter Ruling DA 90-1824), 5 FCC Rcd. 7586, 68 RR 2d 1028 (1990).

⁴⁸ A companion case, *Joseph A. Belisle, Esquire*, (Letter Ruling DA 90-1825), 5 FCC Rcd. 7585, 68 RR 2d 1031 (1990), released the same date by the Chief of the Complaints and Investigations Branch of the Mass Media Bureau, similarly held that a reciprocal programming and sales arrangement (termed a "network affiliation agreement") between two stations did not violate any FCC rule or policy.

authority it had in hand, to carve out a new policy that would provide relief for at least some radio broadcasters.⁴⁹

44. By the end of 1991, the economic situation had worsened dramatically, and the Commission was forced to consider additional measures. In its "Overview" Memorandum⁵⁰ to Chairman Sikes, the Bureau decried the economic crisis in radio, and called for a number of changes in regulatory philosophy downplaying "diversity" in favor of economic survival.⁵¹

45. The Commission finally responded, in 1992, by amending its rules to increase the national ownership limit for radio, and to permit local radio "duopolies" to be created in almost all markets.⁵² The Commission justified its decision to permit

⁴⁹ This conclusion seems valid particularly in light of the Mass Media Bureau's later recommendations to the Commission. See, Mass Media Bureau, *Overview of the Radio Industry*, January, 1992 ("MMB Overview"). While the memorandum was initially intended to be an internal working document not for release, several copies were "leaked" to the press, and the Commission decided to include the memorandum in the record of the rule making docket (MM Docket 91-140).

⁵⁰ *Id.*

⁵¹ The concern was later acknowledged by Acting Chairman James Quello. In a speech to the NAB in July, 1993, Acting Chairman Quello told broadcasters that he was considering imposing a freeze on the allotment of any more FM channels. "I think in the name of diversity and competition we've licensed too many radio stations..." "I never thought I'd live to see the day when 60% of radio stations are losing money." The point was raised again by Quello in a speech to the New York State Broadcasters Association in late July, 1993, where he said, "I don't see where the public interest would be served by allowing other people to go bankrupt." BROADCASTING AND CABLE, p. 14 (Aug. 2, 1993).

⁵² *Revision of Radio Rules and Policies*, *supra*, Note 40. In response to these various petitions, and to appease Congressional committees charged with oversight of FCC activities, the Commission released a *Reconsideration Order* on September 4, 1993. *Memorandum Opinion and Order and Further Notice of Proposed Rule Making*, 7 FCC Rcd 6387, 71 RR 2d 227 (1992) ("1992 Reconsideration Order").

limited consolidation by pointing to the substantial numerical increase in radio stations throughout the country as well as other forms of competing media.⁵³

46. During the three years following the *1992 Reconsideration Order*, a number of consolidations took place.⁵⁴ It was clear, however, that the excess proliferation of radio stations brought about by the *Clear Channel Proceeding* and Docket 80-90 required a more expansive solution.

47. In early 1996, Congress passed the Telecommunications Act of 1996. The Commission implemented the broadcast ownership-related provisions in its rules without the necessity of a formal notice and comment rule making, because of the “self-executing” nature of those provisions.⁵⁵ There followed a series of additional market consolidations, whereby the number of independently-owned radio stations in a number of local markets declined. This was the natural and anticipated outcome

⁵³ *Id.* The Commission stated,

The number of radio stations ... has grown dramatically ... At the same time, the industry has witnessed a significant increase in the number of competing audio services delivered by cable systems, including music offerings such as MTV and VH1 and cable network services ... In addition, non-radio sources competing with radio owners for audience and advertising revenues have also multiplied, with the number of television stations growing from 883 to 1,489 since 1985 and cable penetration increasing from 41 percent to 64 percent since 1984.

[O]ur goal is not to introduce wholesale restructuring of the broadcasting industry ... Rather, we intend to promote competition and diversity by modifying [the] ownership rules in a manner that directly addresses the long-term economic changes that are endemic to the radio industry.

Id., 70 RR 2d at 908-909.

⁵⁴ For a discussion of the major cases implementing the 1992 duopoly rules for radio, see, D. M. Hunsaker, “Duopoly Wars: Analysis and Case Studies of the FCC’s Radio Contour Overlap Rule,” 1994 COMMLAW CONSPECTUS 21 (1994 Ed.).

⁵⁵ The new Act eliminated the cap on national ownership of radio stations and relaxed further the limitations on multiple ownership in local markets. A four-tier market approach was reinstituted, but the secondary requirement of a maximum allowable audience share was eliminated. See, 47 CFR §73.3555(a)(1).

of the relaxation of the local ownership rules, both by the Commission, by its rule making in 1992-93, and by Congress, in 1996. The further result, also envisioned and fervently desired, is that the radio industry is much stronger today, at the end of the decade, than it was at the beginning, when over 60% of stations were operating in the red.

48. The lesson to be learned from the past twenty years should be obvious: Policies that promote significant proliferation of available radio frequencies in a short period of time, while perhaps politically popular, do not result in achieving the stated goals (increased minority ownership or increased diversity of thought and opinion) for which they were adopted. Instead, they create economic instability in the radio broadcast industry, cause stations to lay off employees (including minority and female employees), suspend operations, go bankrupt or go dark. The ultimate loser is the public.

49. The Commission perhaps hopes to avoid the mistakes of its predecessors by implementing the severe restrictions it is proposing on who may own what LPFM stations, and how many they may own. But the reality is that it cannot control the future, and subsequent administrations of FCC Commissioners may very well have to reverse those ownership policies, and permit both consolidation of LPFM's in local markets, as well as ownership of them by existing full service licensees, as a means of reversing another era of economic stability brought on by an unwise proliferation policy.

50. The admonition, "Those who do not learn from the mistakes of the past are doomed to repeat them," is nowhere more applicable than to the policy issues now facing the Commission in this proceeding. One can only hope that the Commission

will heed the lessons of the not-to-distant past and reject LPFM as inefficacious and unsound public policy.

II. THE COMMISSION'S LPFM PROPOSALS ARE TECHNICALLY UNSOUND.

51. The lack of a valid public interest reason for adopting the LPFM proposals should be more than sufficient cause to reject them. However, as noted above, the proliferation of additional stations in the FM band will likely produce economic instability, both in the full service stations, and in those new LPFM stations the Commission proposes to create. Not only will the adoption of such a policy precipitate an economic crisis, it is technically unsound, with the result being the destruction of a significant of current aural broadcast service now provided by FM broadcast licensees.⁵⁶

52. The increase in interference, and the loss of service from existing full service stations would come about as a result of proposals to limit second- and third-adjacent channel protection standards for LPFM stations *vis-a-vis* full service stations.⁵⁷ The Commission has acknowledged that retaining existing protection

⁵⁶ By proposing to relax the interference protection afforded by second and third adjacency safeguards, the Commission is, in effect, robbing Peter to pay Paul. As noted by Commissioner Furchtgott-Roth,

In order to create any substantial amount of new service, protection standards have to be loosened so far as to eliminate third and even second adjacent channel safeguards. This is a severe incursion on the rights of current license holders, as well as on the value of their licenses, which will be drastically undercut in the market if these proposals are adopted. This proposal also potentially impairs the ability of current licensees to serve their listeners, who must not be forgotten; while new people may be able to broadcast, others may lose their ability to receive and listen to existing stations due to interference.

NPRM, dissenting statement of Commissioner Furchtgott-Roth, p. 1.

⁵⁷ The Commission is *not* proposing to eliminate second- and third- adjacent protection standards as *between* classes of full service FM stations. However, when one

standards would limit substantially the number of channels available for low power radio generally and could preclude altogether the introduction of LPFM service in mid-sized and large cities, and therefore proposes to authorize low power service without any 2nd- and 3rd-adjacent channel protection standards.⁵⁸ However, as noted below, the Commission has already reduced the protection afforded full service stations by a number of moves designed to accommodate greater flexibility in transmitter site selection. The further relaxation of existing protection standards could lead to even greater loss of service than is now being experienced by the public.

A. The Commission Has Already Substantially Relaxed the Protection Standards of §73.207.

53. The Commission has already substantially relaxed the protection standards originally afforded by Section 73.207 of the Rules. In 1989, the Commission amended the rules to permit an alternative method of determining whether an application for an FM transmitter site would be technically permissible. Section 73.215 of the Rules was amended to permit an applicant for commercial FM facilities to request the authorization of a transmitter site that would be short-spaced to the facilities of other co-channel or adjacent channel stations (or would aggravate an existing short-spacing not covered under 73.213 of the Rules), provided the service of those other licensees is protected from interference, whether by taking advantage of terrain elevation in the direction of the short-spaced station(s), by an appropriate reduction in operating facilities (power and/or antenna height), by use of a directional

is being eaten alive by ants, it is hard to find comfort in the fact that one is still protected from attack by lions.

⁵⁸ NPRM, ¶42.

antenna, or by any combination of these means.⁵⁹ This “Contour Protection Rule”⁶⁰ was adopted to permit greater flexibility in “shoe-horning” stations into areas that were prohibited by the fixed distance separation standards of §73.207.⁶¹

54. In addition, the Commission only recently adopted a number of amendments to §73.213 to permit grandfathered short-spaced station greater flexibility in moving their transmitter sites.⁶² The *Report and Order* contained several revisions to the rule: (1) §73.213(a) was amended to permit changes of transmitter location or station facilities if the licensee can show that no additional interference to co-channels and first adjacent channels, and that any area predicted to lose service as a result of interference has adequate existing service remaining; (2) §73.213(a) was also revised to permit a grandfathered station to change transmitter location or station facilities without regard to short-spaced second adjacent and third adjacent channel stations;

⁵⁹ *FM Broadcast Stations (Short-Spacing Using Contour Protection)*, 4 FCC Rcd 1681, 65 RR 2d 1651 [1989], *recon. granted in part, denied in part*, 6 FCC Rcd 5356, 69 RR 2d 1106 (1991); *pet. for further recon. dismissed*, DA 92-546, 5/8/92. The Contour Protection Method is not applicable in FM allotment rule making proceedings, where the petitioner is still required to show that the maximum facilities of the particular class of FM station being proposed would meet all distance separation requirements. *Id.*

⁶⁰ The Commission has stated it is not inclined to use a contour protection method in the licensing of LPFM stations, given the increased complexity of such applications and the Commission resources that would have to be devoted to processing such applications.

⁶¹ At the same time, the Commission announced that it would no longer consider petitions for waiver of §73.207 of the Rules. The policy of waiving 73.207, it reasoned, even if only to permit short-spacing of a mile, is undesirable because it undermines, at least to some extent, the efficacy of the distance separation table. New Section 73.215, the Commission said, provides for site selection flexibility in those exceptional circumstances where no fully spaced sites are available. Additional short-spacing waivers of 73.207 would not be in the public interest where an alternative means of achieving a similar result, such as 73.215, is available. *See, FM Broadcast Stations (Short-Spacing Using Contour Protection - Reconsideration Order)*, 6 FCC Rcd 5356, 69 RR 2d 1106 (1991).

⁶² *Grandfathered Short-Spaced FM Stations*, 12 FCC Rcd 11840, 8 CR 1238 (1997).

(3) finally, applicants previously required to obtain agreements from affected stations to implement facility modifications are now no longer be required to do so.⁶³

55. The chipping away of the original protection standards to permit flexibility in relocating stations, as well as the increase in the number of FM stations on the band, has led to a degradation of service in some areas. For example, the Commission has held that under §73.213(c)(2), a Class A FM Station may unilaterally increase power from 3 kW to 6 kW in the direction of a short-spaced Class B station, if there is written consent from the Class B station and the proposal is otherwise in the public interest.⁶⁴ Accordingly, further relaxation of protection standards would not be in the public interest.

B. Elimination of Third Adjacent Channel Protection Will Cause Objectional Interference in a Number of Cases.

56. The Commission has contended that elimination of third adjacent channel protection (600 kHz removed) would cause little, if any interference to existing stations, even by LP1000 stations.⁶⁵ However, it is clear that the amount of interference created will frequently depend upon factors which the Commission

⁶³ *Id.*

⁶⁴ In *Multi-Market Radio of Northampton, Inc.*, Ref. 1800B3-DIF/PHD, dated 4/18/96, the Chief of the Audio Services Division granted, over informal objections, the application of a Class A licensee seeking to increase its maximum ERP to 6 kW despite the creation of a loss of service in population of over 65,000 to the affected Class B station. See BPH-950808IC.

⁶⁵ The Commission stated,

An LP1000 station operating with maximum facilities would be predicted, under the current protection ratios, to cause 3rd-adjacent channel interference to a distance of 1.4 kilometers (0.9 miles) from its antenna, and even this very small predicted interference zone could possibly pose a potential problem to other stations only if the LP1000 station were located at, or very near, the outer edge of the protected station's service contour.

NPRM, ¶43.

proposes not to consider, such as terrain, the number of other co-channel, and first adjacent channel stations nearby, the existence of other LP1000 stations inside the protected contours of the 2nd- and 3rd- adjacent stations, as well as the quality of receivers.⁶⁶ Moreover, the number of persons residing inside the blanketing contours of such LPFM stations⁶⁷ could be significant in urbanized areas—where the Commission says a need for LPFM exists to combat the “evils” of consolidation.⁶⁸

C. *Elimination or Relaxation of Second Adjacent Channel Protection Will Cause Massive Interference and Substantially Degrade the Quality of Existing Broadcast Service to the Public.*

57. As demonstrated above, third adjacent channel interference can be substantial in some cases, with the result being the degradation of existing broadcast service, the decline in station values, and harm to the listening public. The

⁶⁶ For example, in *FM Broadcast Stations. (Cal-Nev-Ari, Boulder City and Las Vegas, Nevada)*, 10 FCC Rcd 7717, 78 RR 2d 1569 (MMB 1995), the Commission rejected a petition for rule making seeking to modify the licenses of two FM stations to specify alternative channels in an attempt to resolve interference to the reception of the first station inside its 60 dBu contour by the second adjacent channel station. The Commission, while recognizing that mileage separation requirements, as opposed to contour protection, sometimes overprotect or underprotect other adjacent channel stations, refused to change the two stations' respective frequencies because the two stations were *fully spaced* under §73.207 of the Rules.

⁶⁷ Assuming the Commission's predicted 1.4 km radius for 3rd adjacent channel interference by an LP1000 station, this would equate to a blanketing area inside the full service station's protected contour of over 6 km² (2.38 square miles). In densely populated urban areas, thousands of people could reside in an area that size. *See infra*, Note 68.

⁶⁸ Using the Commission's calculations for predicted interference of an LP1000 station on third adjacent channels, and applying it to three different 1990 Census subdivisions within the New York urbanized area, an LP1000 station's operation would create a loss of service to 17,689 persons in the West Hempstead subdivision, 67,153 persons, if in the Mount Vernon subdivision (Westchester County) or over 186,000 persons if in the Manhattan Borough subdivision. SOURCE: Census of Population and Households in New York Urbanized Area (1990), CPH-2-34. This degree of interference can hardly be said to be *de minimis*, as is being asserted by LPFM proponents.

elimination of second adjacent channel protection standards for LPFM would cause even greater harm.

58. The Commission has proposed eliminating second adjacent channel protection for LPFM service solely on the basis that its past experience with grandfathered FM stations during the period, 1964 to 1987, when 2nd and 3rd adjacent protection standards were not applicable, turned up no complaints of interference.⁶⁹ The significance of this "lack of evidence" is blunted by the fact that the short spacings had existed from the beginning of initiation of FM service in the areas, so that the listening public had no comparative basis to judge whether interference existed or not. The grandfathered stations have never been in a situation where there was no interference from the other station. The same cannot be said about the proposed new LPFM service.⁷⁰

59. The creation of a new broadcast service to overlay on top of an existing broadcast service, with no new spectrum allocated, is clearly bad technical policy. The concerns the Commission itself raises about the potential harm of eliminating adjacent channel protection, tightening of spectral emissions, the reduction of

⁶⁹ *NPRM*, ¶146. WBC believes that a more thorough check of the Commission's records would likely yield evidence to the contrary. The Commission ordered Station WOVA, Deruyter, New York to cease operating its on-channel Booster Station because the second-adjacent channel station had received numerous complaints from persons using a variety of radio receivers of actual interference to the second adjacent channel station.

⁷⁰ As noted above (*supra*, Note 68), while the number of square miles of interference caused by an LPFM to a full service FM station on a second adjacency might be proportionally small to the full service FM's entire service area, the number of persons affected could be significant, particularly where the LPFM transmitter is located at the center of an urbanized area.

bandwidth,⁷¹ and their impact on plans for implementation of in-band on-channel digital signals on the FM band to replace the current analog transmission mode – all suggest that LPFM on the existing FM band is impractical and potentially disastrous, economically and technically, to existing FM broadcast service.⁷² *There simply is not enough room in the present FM band to have both kinds of services.*⁷³ The LPFM proposals, as presently envisioned, should not be implemented.

CONCLUSION

60. It has been demonstrated by the above analysis that LPFM, as presently conceived and proposed by the Commission, is, at best, unnecessary, and at worst, economically and technically unsound, with the potential for causing significant and substantial harm to existing broadcast service. If there is a need for additional outlets

⁷¹ The Commission should recall that it previously rejected a proposal to reduce bandwidth in the AM band to 9 kiloHertz spacing, as impractical, likely to cause interference, and too great an economic burden on existing broadcasters to convert. The same would be true in the FM band so long as FM service remains analog, despite the greater bandwidth afforded by FM broadcasting.

⁷² As the Commission itself acknowledges, many questions about IBOC digital service at this time remain unanswered. To jeopardize this real and significant improvement in broadcasting in favor of an untried, and lower quality analog service of limited potential, even with reductions in protection requirements, is to reverse direction and to reduce the level of service to the public. At the very least, consideration of proposals for a low power FM radio service should be postponed until after IBOC digital service standards have been developed and approved, and a conversion timetable adopted for FM similar to that adopted for converting television from analog to digital.

⁷³ The Commission may wish to reconsider its decision not to allocate “new” spectrum to LPFM service. For example, by reallocating TV Channel 6 to FM service, and moving those channels elsewhere, e.g., to the digital TV band, the Commission could make available substantially more spectrum on the FM band for LPFM service without eroding existing FM service. Whether this *should* be done, however, in light of the lack of demonstrated need for LPFM, and the unlikelihood that the stated goals of new ownership opportunities for minorities and greater diversity would be met, is a different question.

of community participation and personal expression – a need far from demonstrated in the instant *NPRM* – adequate alternatives already exist in the form of cable public access channels, citizens' band radio, the amateur radio service e-mail and the Internet.

61. If there must be a LPFM service, it should have its own spectrum, not simply as an overlay on existing FM, where stricter protection standards, public service obligations and greater financial commitment and risk will still apply. Broadcasters have stood by and watched the Commission create a new digital DBS service to compete with existing terrestrial-based service; have seen the Commission act, with uncharacteristic urgency, to create a new digital audio service ("DARS") (also delivered by satellite), to compete with existing broadcast service, and have seen proposed improvements for existing audio and video services languish for years in "advisory committees," or in FCC or private laboratories, instead of being made a priority.

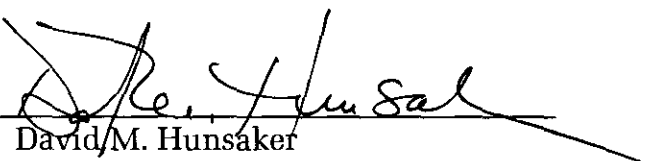
62. Now, the Commission proposes once again to pass over existing broadcast services in favor of politically popular proposals to satisfy largely personal agendas and gratify private egos, but which are poorly conceived, impractical and technically unsound. These proposals, while superficially appealing to some groups, are neither fair nor efficient use of radio, and lack any real efficacy. They do not serve the public interest, but rather private, personal interests. They should be rejected.

WHEREFOR, the above premises considered, WBC respectfully urges that the proposals set forth in the *NPRM* released February 3, 1999 be **REJECTED**, and that this proceeding be **TERMINATED**.

Respectfully submitted,

WILLIS BROADCASTING CORPORATION

By: _____


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August 2, 1999

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SHEET 5

Contour overlay map showing extent of interference contours to third adjacent channel in three communities of New York Urbanized Area. (See Note 65, supra.)

KEY

- | | | |
|-------------------------|----|------------------|
| NEW JERSEY | 5 | PLANDOME HEIGHTS |
| BERGEN COUNTY | 6 | MUNSEY PARK |
| 1 WASHINGTON | 7 | ROSLYN ESTATES |
| 2 Saddle Brook | 8 | KENSINGTON |
| 3 SADDLE BROOK | 9 | GREAT NECK PLAZA |
| 4 RUTHERFORD | 10 | THOMASTON |
| | 11 | RUSSELL GARDENS |
| | 12 | Manhasset Hills |
| | 13 | Albermar |
| NEW YORK | 14 | EAST WILLISTON |
| NASSAU COUNTY | 15 | HEWLETT BAY PARK |
| 1 MANORHAVEN | 16 | HEWLETT HARBOR |
| 2 PORT WASHINGTON NORTH | 17 | HEWLETT NECK |
| 3 BAXTER ESTATES | 18 | WOODSBURGH |
| 4 PLANDOME MANOR | | |

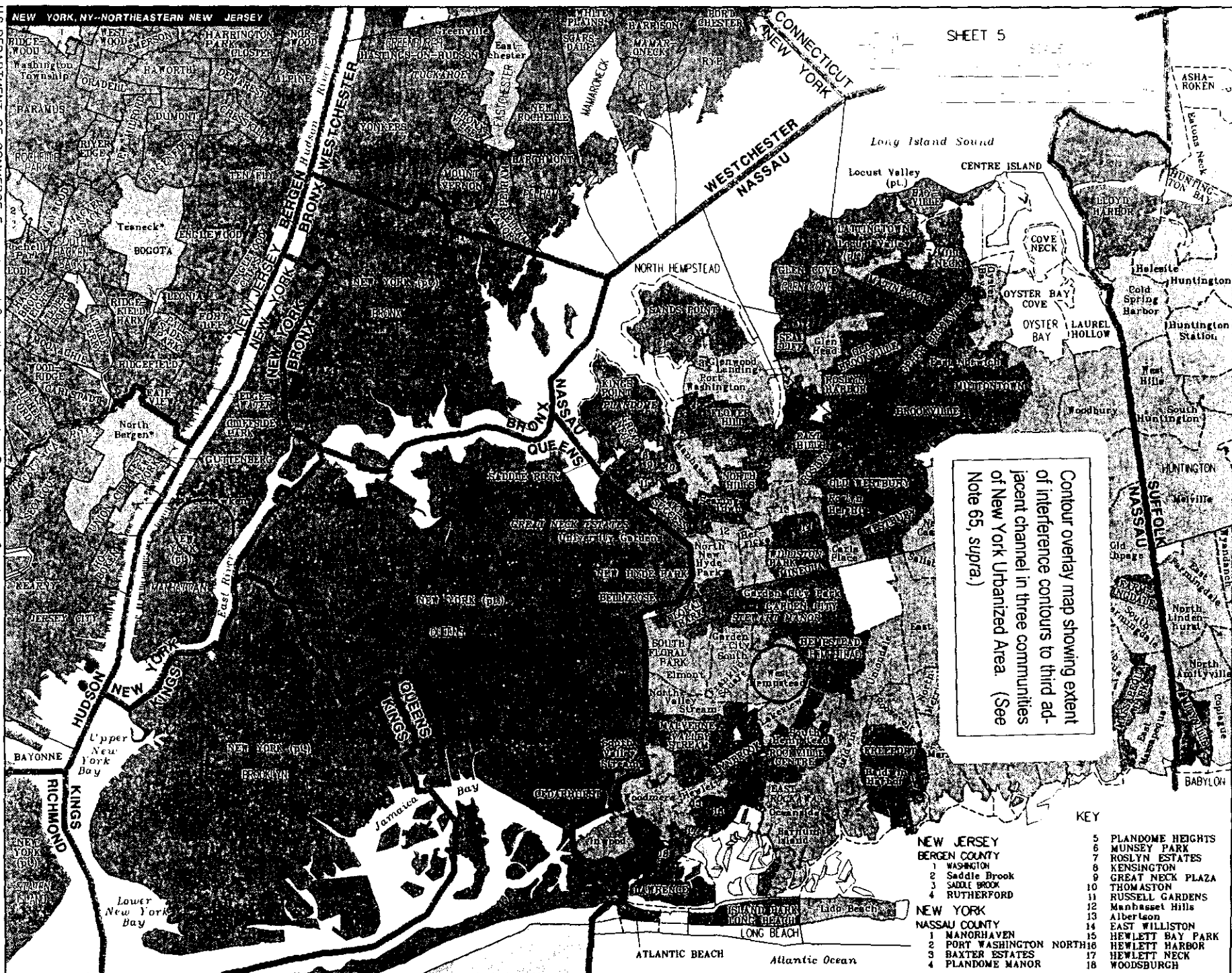


Table 9. Population and Housing Units, 1970 to 1990; Area Measurements and Density: 1990—Con.

[For information concerning historical counts, see "User Notes." Density is computed using land area. For definitions of terms and meanings of symbols, see text.]

Place and (in Selected States) County Subdivision	Population			Housing units			1990 area measurements						1990 density	
	1990	1980	1970	1990	1980	1970	Total area		Land area		Population per—		Housing units per—	
							Square kilometers	Square miles	Square kilometers	Square miles	Square kilometer	Square mile	Square kilometer	Square mile
Londonville CDP, Albany County	10 822	11 480	9 299	3 954	3 663	2 599	13.0	5.0	12.9	5.0	838.9	2 144.4	304.5	780.8
Loudonville, St. Lawrence County	3 040	2 946	2 727	1 297	1 150	899	165.4	63.8	124.7	48.2	34.4	1 144.4	10.4	26.8
Loudonville village, St. Lawrence County	3 632	3 354	3 671	1 571	1 439	1 350	5.1	2.0	5.1	2.0	712.2	1 810.0	308.0	785.5
Loudonville village, Lewis County	4 849	4 575	4 754	1 934	1 755	1 618	98.7	38.1	97.9	37.8	49.5	128.3	19.8	51.2
Loudonville village, Sullivan County	1 425	1 210	857	2 105	1 977	1 805	128.6	49.6	121.8	47.0	11.7	30.3	10.5	27.1
Lyme town, Jefferson County	1 701	1 695	1 550	2 105	1 977	1 805	276.9	106.9	276.9	106.9	56.1	145.3	14.5	37.5
Lynchburg village, Nassau County	19 208	20 424	23 151	7 406	7 524	7 552	3.0	1.2	3.0	1.2	3 693.8	9 404.0	1 424.2	3 700.0
Lynchburg CDP, Onondago County	4 516	5 129	339	1 980	1 968	1 50	86.2	33.3	86.0	33.2	505.3	1 263.9	660.8	1 690.0
Lynchburg town, Onondago County	4 503	610	339	1 410	1 368	1 50	11.6	4.5	11.5	4.5	399.4	1 020.7	157.5	402.4
Lynchburg CDP, Onondago County	4 593	1 811
Lynchburg village, Onondago County	933	916	888	353	342	307	2.7	1.0	2.7	1.0	333.0	853.0	130.7	333.0
Lynchburg village, Onondago County	4 280	4 160	4 015	1 752	1 673	1 581	10.7	4.1	10.5	4.1	407.6	1 043.9	166.9	427.3
Lynchburg town, Onondago County	6 315	6 073	6 015	2 419	2 321	2 019	97.2	37.5	96.9	37.4	65.2	168.9	25.0	64.7
Lynchburg village, Onondago County	1 281	1 135	1 013	634	519	382	181.4	70.1	178.2	68.8	7.2	18.6	3.6	9.2
Lynchburg village, Onondago County	698	755	852	287	281	261	2.8	1.1	2.5	1.0	279.2	698.0	38.9	98.0
Lynchburg village, Onondago County	16 346	13 897	11 968	6 233	4 737	3 478	167.4	64.6	160.4	61.9	101.9	264.1	114.8	287.0
Lyons Falls village, Onondago County	809	796	703	533	400	350	102.7	39.6	101.3	39.1	8.0	20.7	17.5	45.4
Lyons Falls village, Onondago County	1 400	1 400	1 488	517	460	350	3.2	1.2	3.2	1.2	437.5	1 166.7	161.6	430.8
Lyons Falls village, Onondago County	7 375	6 508	5 488	2 712	2 214	1 671	100.6	38.7	100.2	38.7	73.6	190.6	27.1	70.1
Lyons Falls village, Onondago County	1 074	1 188	1 319	436	432	443	2.6	1.0	2.6	1.0	413.1	1 074.0	167.7	436.0
Lyons Falls village, Onondago County	2 338	2 015	1 749	1 215	1 107	845	106.5	41.1	105.2	40.6	22.2	57.6	11.5	29.9
Lyons Falls village, Onondago County	790	816	813	742	718	695	183.4	63.1	158.4	61.2	5.0	12.9	4.7	12.1
Lyons Falls village, Onondago County	316	396	384	135	161	138	1.3	0.5	1.3	0.5	243.1	632.0	103.8	270.0
Lyons Falls village, Onondago County	2 774	2 314	2 221	1 239	1 041	845	107.2	41.4	105.9	40.9	26.2	67.6	11.7	30.3
Lyons Falls village, Onondago County	1 568	1 852	1 635	477	453	312	138.8	53.6	137.1	52.9	11.4	29.6	4.9	12.8
Lyons Falls village, Onondago County	7 755	7 481	5 245	2 972	2 552	1 852	18.7	7.2	18.8	7.2	562.0	1 463.2	215.4	560.8
Lyons Falls village, Onondago County	5 576	5 777	5 245	2 972	2 552	1 852	18.7	7.2	18.8	7.2	47.1	122.0	17.5	45.4
Lyons Falls village, Onondago County	6 777	7 668	8 048	3 037	3 070	2 814	266.2	102.8	263.8	101.9	891.7	2 259.0	399.6	1 012.3
Lyons Falls village, Onondago County	11 799	9 968	8 813	5 053	2 932	1 469	81.3	31.4	72.6	28.0	161.3	418.2	69.6	180.5
Lyons Falls village, Onondago County	9 054	9 762	10 036	3 178	3 072	3 056	2.7	1.1	2.7	1.1	3 353.3	8 230.9	1 177.0	2 889.1
Lyons Falls village, Onondago County	7 792	7 717	4 319	3 391	3 178	4 514	255.3	98.6	249.2	96.2	39.3	101.8	21.6	56.0
Lyons Falls village, Onondago County	17 325	17 617	18 809	6 842	6 482	6 111	17.3	6.7	16.4	6.4	2 062.5	5 414.1	814.5	2 138.1
Lyons Falls village, Onondago County	27 704	29 019	31 265	10 832	10 580	10 134	36.4	14.0	36.4	14.0	1 620.2	4 197.9	633.5	1 641.4
Lyons Falls village, Onondago County	1 598	1 598	1 598	7 708	7 708	7 708	3.0	1.2	3.0	1.2	532.7	1 331.7	37.8	98.0
Lyons Falls village, Onondago County	9 351	9 022	7 840	3 703	3 385	2 443	97.9	37.8	97.9	37.8	95.5	247.4	23.6	60.0
Lyons Falls village, Onondago County	7 718	8 485	8 541	2 897	2 897	2 651	6.2	2.4	6.2	2.4	1 244.8	3 203.3	456.5	1 179.2
Lyons Falls village, Onondago County	3 722	3 722	3 722	1 236	1 236	1 236	1.5	0.6	1.5	0.6	2 481.3	6 205.3	824.0	2 060.0
Lyons Falls village, Onondago County	1 487 722	1 428 253	1 539 233	785 172	754 796	714 593	87.2	33.7	87.2	33.7	2 481.3	6 205.3	824.0	2 060.0
Lyons Falls village, Onondago County	3 527	3 634	3 752	1 523	1 423	1 398	76.8	29.7	75.2	28.0	46.9	121.6	20.3	52.5
Lyons Falls village, Onondago County	4 764	5 241	4 295	2 027	1 938	1 306	4.4	1.7	4.4	1.7	1 082.7	2 802.4	460.7	1 192.4
Lyons Falls village, Onondago County	30 636	28 071	26 071	12 136	11 526	10 514	129.4	50.0	128.5	49.6	238.6	618.1	94.4	244.7
Lyons Falls village, Onondago County	444	431	494	152	163	155	2.4	0.9	2.4	0.9	185.0	479.3	63.3	168.9
Lyons Falls village, Onondago County	5 672	5 384	5 488	2 375	2 179	1 824	1.6	0.6	1.6	0.6	4 726.7	11 344.0	1 937.5	4 650.0
Lyons Falls village, Onondago County	6 198	2 567	66.5	25.7	66.4	25.6	93.3	242.1	38.7	100.3
Lyons Falls village, Onondago County	724	784	603	461	394	268	102.5	39.6	102.5	39.6	7.1	18.3	4.5	11.6
Lyons Falls village, Onondago County	1 107	1 046	1 033	418	388	351	2.6	1.0	2.6	1.0	425.8	1 107.0	160.8	418.0
Lyons Falls village, Onondago County	2 019	1 804	1 777	418	388	351	2.6	1.0	2.6	1.0	31.2	80.8	11.5	29.9
Lyons Falls village, Onondago County	5 785	4 956	4 146	2 533	2 275	1 641	143.0	55.2	141.4	54.6	37.4	96.8	17.9	46.4
Lyons Falls village, Onondago County	1 840	1 870	2 017	814	792	682	1.6	0.6	1.6	0.6	1 150.0	3 064.7	508.8	1 356.7
Lyons Falls village, Onondago County	6 465	6 180	5 744	2 467	2 192	1 790	84.7	32.7	84.3	32.6	76.7	198.3	29.3	75.7
Lyons Falls village, Onondago County	8 685	8 222	7 877	1 954	1 741	1 457	86.5	33.4	85.4	33.0	101.7	263.2	22.9	59.2
Lyons Falls village, Onondago County	5 250	4 661	3 250	1 836	1 377	341	1.8	0.7	1.8	0.7	355.0	912.9	195.0	501.4
Lyons Falls village, Onondago County	4 901	4 456	3 784	1 719	1 420	1 156	71.4	27.6	71.4	27.6	75.6	190.2	25.7	66.5
Lyons Falls village, Onondago County	2 200	2 275	1 580	1 119	1 008	72	8.7	3.3	8.7	3.3	305.6	785.7	22.7	58.9
Lyons Falls village, Onondago County	7 430	7 035	5 657	2 869	2 661	2 078	68.6	26.5	64.4	24.9	115.4	298.4	44.5	113.7
Lyons Falls village, Onondago County	2 125	2 132	2 618	777	730	616	85.0	32.8	85.0	32.8	25.0	64.8	9.1	23.5
Lyons Falls village, Onondago County	1 494	1 494	1 465	536	545	409	197.1	76.1	197.1	76.1	6.9	17.9	2.7	7.1
Lyons Falls village, Onondago County	1 358	1 690	1 415	917	802	616	134.3	51.9	134.1	51.8	12.8	33.1	6.8	17.7
Lyons Falls village, Onondago County	1 352	1 156	1 140	662	509	379	138.4	53.4	138.1	53.3	9.8	25.4	4.8	12.4
Lyons Falls village, Onondago County	22 018	24 444	26 821	7 225	7 342	7 133	10.4	4.0	9.4	3.6	3 342.3	8 116.1	748.6	1 906.0
Lyons Falls village, Onondago County	18 044	19 779	22 112	5 720	5 571	5 343	5.7	2.2	5.7	2.2	2 322.1	6 201.8	1 021.4	2 600.0
Lyons Falls village, Onondago County	12 851	12 851	14 042	5 017	4 935	4 518	12.0	4.6	11.5	4.4	1 019.0	2 663.4	436.3	1 140.2
Lyons Falls village, Onondago County	13 876	14 856	16 021	5 884	5 608	5 109	151.5	58.5	151.5	58.5	113.6	294.2	48.3	125.2
Lyons Falls village, Onondago County	10 413	10 413	...	4 234	3 356	...	12.4	4.8	11.5	4.4	1 198.1	3 131.4	388.2	982.3
Lyons Falls village, Onondago County	8 772	8 318	4 870	4 212	3 932	3 235	13.8	5.3	11.0	4.2	1 935.7	4 930.7	388.2	1 002.9
Lyons Falls village, Onondago County	3 902	3 923	1 841	318	353	844	6.9	2.7	6.9	2.7	1 266.4	3 235.4	46.1	127.3
Lyons Falls village, Onondago County	7 923	7 511	1 995	2 191	1 910	2 599	26.5	10.2	22.4	8.6	174.2	453.7	97.8	254.8
Lyons Falls village, Onondago County	6 418	7 511	8 292	2 693	2 841	2 599	3.4	1.3	3.4	1.3	1 887.6	4 936.9	792.1	2 071.5

Table 9. Population and Housing Units, 1970 to 1990; Area Measurements and Density: 1990—Con

For information concerning historical counts, see "User Notes." Density is computed using land area. For definitions of terms and meanings of symbols, see text.

Place and [In Selected States] County Subdivision	Population			Housing units			1970 area measurements						1970 density					
	1970	1980	1970	1970	1980	1970	Total area		Land area		Population per --		Housing units per --					
							Square kilometers	Square miles	Square kilometers	Square miles	Square kilometer	Square mile	Square kilometer	Square mile				
Morris village, Orange County	642	681	675	272	274	272	1.9	7	1.9	7	337.9	917.1	143.2	386.6				
Morris town, Orange County	1 780	1 780	1 630	818	708	590	101.3	39.1	101.1	39.0	17.7	45.8	8.1	21.0				
Monticello CDP, Suffolk County	1 742	1 721	1 276	660	587	367	6.9	2.7	6.7	2.6	17.7	45.8	8.1	21.0				
Monticello village, St. Lawrence County	409	461	532	227	217	198	2.7	1.0	2.5	1.0	26.0	67.0	98.5	253.8				
Monticello town, St. Lawrence County	2 019	1 921	1 823	1 615	1 298	1 174	154.2	59.5	119.0	45.9	15.6	40.0	10.6	27.2				
Monticello village, Madison County	2 732	2 707	2 296	443	342	198	3.0	1.2	3.0	1.2	17.0	44.0	13.6	35.2				
Monticello town, Orange County	5 971	4 398	2 966	1 633	1 290	957	66.1	25.5	65.3	25.2	91.4	236.9	25.0	64.8				
Monticello CDP, Rockland County	6 018	8 025	8 172	2 600	3 188	2 896	3.8	1.5	3.8	1.5	1 562.4	4 008.7	25.0	64.8				
Monticello village, Westchester County	9 108	8 025	8 172	3 665	3 188	2 896	8.1	3.1	8.1	3.1	1 562.4	4 008.7	25.0	64.8				
Mount Pleasant town, Livingston County	3 102	3 039	3 417	1 409	1 275	1 128	5.3	2.0	5.3	2.0	585.3	1 551.0	25.8	65.5				
Mount Pleasant town, Westchester County	4 633	4 478	4 579	1 899	1 741	1 459	131.4	50.7	131.2	50.7	35.3	91.4	14.5	37.5				
Mount Pleasant town, Westchester County	40 590	39 298	38 535	13 198	12 708	11 122	84.7	32.7	84.7	32.7	56.1	145.3	18.1	47.5				
Mount Pleasant CDP, Suffolk County	6 991	6 991	...	2 559	1 995	1 995	16.5	6.4	15.5	6.0	51.6	133.2	18.1	47.5				
Mount Vernon city, Westchester County	67 153	66 713	72 778	26 232	26 189	25 536	11.1	4.4	11.1	4.4	5 899.6	15 262.0	165.1	426.5				
Mount Vernon village, Westchester County	499	499	435	174	181	147	1.3	5	1.2	5	19.1	48.6	79.1	193.3				
Murray Park village, Nassau County	2 692	2 806	2 980	837	845	817	2.2	0.9	2.2	0.9	19.1	48.6	79.1	193.3				
Murray Park village, Nassau County	2 436	2 478	2 076	1 055	997	681	5.9	2.3	5.9	2.3	2 070.8	5 384.0	64.8	168.8				
Murray town, Cortland County	4 921	4 754	4 638	1 906	1 764	1 529	80.6	31.1	80.4	31.0	411.9	1 059.1	178.8	458.7				
Murray town, Orleans County	3 024	2 755	2 755	951	851	534	15.8	6.1	15.6	6.1	191.2	493.7	60.2	155.9				
Murrayton village, Dutchess County	5 599	5 180	2 826	1 753	1 455	718	11.1	4.3	11.0	4.3	509.0	1 302.1	159.4	407.7				
Myers Center CDP, Dutchess County	1 846	1 425	1 020	648	491	297	43.1	24.4	43.0	24.3	29.3	76.0	10.3	26.7				
Norfolk town, Broome County	14 045	12 578	10 447	4 748	4 029	2 921	14.0	5.4	14.0	5.4	1 004.6	2 604.6	353.4	915.5				
Norfolk CDP, Rockland County	1 068	1 237	1 354	457	543	...	2.5	1.2	2.5	1.2	344.5	890.0	147.4	380.8				
Norfolk village, Ulster County	1 237	1 237	1 354	457	543	...	3.2	1.0	3.1	1.0	344.5	890.0	147.4	380.8				
Norfolk village, Delaware County	2 559	2 338	2 278	1 092	948	814	102.3	39.5	102.3	39.5	494.8	1 237.0	196.8	497.0				
Norfolk town, Cortland County	1 102	880	1 444	485	367	284	94.7	36.5	94.3	36.4	75.0	196.8	196.8	497.0				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County	1 082	1 190	1 286	454	449	418	13.4	5.2	13.4	5.2	735.0	1 894.0	295.1	760.6				
Norfolk village, Wayne County																		

Table 9. Population and Housing Units, 1970 to 1990; Area Measurements and Density: 1990—Con.

[For information concerning historical counts, see "User Notes." Density is computed using land area. For definitions of terms and meanings of symbols, see text.]

Place and (in Selected States) County Subdivision	Population			Housing units			1990 area measurements				1990 density			
							Total area		Land area		Population per—		Housing units per—	
	1990	1980	1970	1990	1980	1970	Square kilometers	Square miles	Square kilometers	Square miles	Square kilometer	Square mile	Square kilometer	Square mile
Waterville town, Orange County	27 193	20 876	16 956	10 522	8 522	7 199	271.5	104.8	263.2	101.6	103.3	267.6	40.0	103.6
Waterville village, Dutchess County	4 479	3 382	4 407	2 070	1 636	1 428	153.0	59.4	153.0	59.1	29.3	75.8	13.5	308.0
Waterville village, Orange County	1 159	1 233	1 204	470	482	458	3.9	1.5	3.9	1.5	29.2	75.8	118.5	35.0
Waterville village, Saratoga County	4 906	2 380	1 887	1 709	892	677	6.7	2.6	6.7	2.6	3 385.7	7 900.0	255.1	657.3
Waterville village, Saratoga County	8 695	2 405	2 879	3 584	1 021	1 044	19.2	7.4	17.0	6.6	1 031.5	1 317.4	210.8	3 523.3
Waterville village, Seneca County	5 116	3 303	5 418	1 932	1 874	1 704	5.2	2.0	5.2	2.0	1 003.1	1 258.0	378.8	966.0
Waterville town, Seneca County	7 765	7 811	7 763	3 099	2 864	2 484	52.3	20.2	52.3	20.2	138.2	357.8	55.1	142.8
Waterville CDP, Suffolk County	1 893	1 893	1 893	1 703	1 703	1 703	42.3	16.3	42.3	16.3	147.7	128.8	44.7	115.9
Waterville CDP, Suffolk County	29 429	27 861	30 787	12 405	11 315	10 818	22.9	8.9	22.5	8.7	1 308.0	3 382.6	551.3	1 425.9
Waterville town, Jefferson County	4 341	3 098	3 026	1 342	1 123	923	93.6	36.1	93.3	36.0	46.5	120.6	14.6	37.8
Waterville village, Oneida County	11 664	11 664	11 664	5 145	5 172	5 172	3.4	1.3	3.4	1.3	489.4	1 280.0	190.0	496.9
Waterville village, Albany County	2 207	2 440	2 716	1 049	1 048	1 048	3.8	1.5	3.8	1.5	513.2	8 508.5	1 513.2	3 957.7
Waterville village, Schuylar County	1 613	1 272	1 072	1 316	1 037	746	299.8	115.8	292.0	115.8	551.8	1 471.3	262.3	699.3
Waterville town, Lewis County	1 068	1 110	1 022	794	785	671	37.7	14.5	37.7	14.5	5.5	14.3	4.5	11.7
Waterville village, Franklin County	4 787	4 738	5 261	2 017	1 936	1 832	37.7	14.5	37.7	14.5	811.4	2 081.3	341.9	877.0
Waterville village, Itasca County	12 348	12 956	11 690	5 259	7 022	6 466	346.3	133.7	338.2	130.6	38.5	94.5	15.5	40.3
Waterville town, Ulster County	5 518	4 298	3 408	1 872	1 488	1 167	91.3	35.2	91.1	35.2	60.6	156.8	20.5	53.2
Waterville village, Steuben County	1 976	1 846	2 022	786	678	661	2.7	1.0	2.7	1.0	731.9	1 976.0	291.1	786.0
Waterville town, Steuben County	4 311	3 546	3 546	1 818	1 580	1 258	102.4	39.5	101.1	39.0	42.6	110.5	18.0	46.6
Waterville village, Steuben County	1 029	1 066	1 066	1 129	1 089	1 089	58.5	22.6	53.6	20.7	19.2	49.7	21.1	54.5
Waterville town, Herkimer County	1 637	1 701	1 616	3 743	3 244	2 994	1 259.9	485.0	1 168.6	451.2	1.4	3.6	3.2	8.3
Waterville village, Monroe County	5 464	5 499	5 037	2 362	2 185	2 078	92.0	35.5	88.2	34.0	938.6	2 483.6	414.4	1 073.6
Waterville village, Monroe County	31 639	28 925	24 739	12 700	10 078	7 078	92.0	35.5	88.2	34.0	938.6	2 483.6	414.4	1 073.6
Waterville village, Cayuga County	1 996	1 952	1 900	740	664	614	46.5	17.9	45.9	17.5	798.4	1 996.0	288.8	722.0
Waterville town, Hamilton County	706	647	604	263	252	249	1.5	0.6	1.5	0.6	411.3	1 028.3	173.3	438.3
Waterville village, Channing County	617	647	779	238	249	249	5.9	2.3	5.9	2.3	888.3	2 278.7	404.6	1 037.8
Waterville village, Allegany County	5 241	5 769	5 815	2 387	2 348	2 116	95.0	36.7	95.0	36.7	85.4	221.1	37.1	96.1
Waterville town, Allegany County	8 116	8 658	8 368	3 527	3 541	2 915	8.7	3.4	8.7	3.4	494.8	1 266.2	152.8	390.9
Waterville village, Rockland County	4 305	3 557	2 113	1 329	1 244	1 143	8.7	3.4	8.7	3.4	494.8	1 266.2	152.8	390.9
Waterville town, Rockland County	2 271	2 271	2 271	1 329	1 244	1 143	8.7	3.4	8.7	3.4	494.8	1 266.2	152.8	390.9
Waterville CDP, Suffolk County	42 410	41 699	12 893	13 799	12 749	3 663	93.4	36.1	93.4	36.1	2 120.5	5 507.8	690.0	1 792.1
Waterville CDP, Suffolk County	4 907	5 118	5 118	1 996	1 581	1 581	20.0	7.7	20.0	7.7	791.5	2 044.6	288.4	745.0
Waterville village, Ontario County	2 536	2 281	1 990	996	885	635	68.1	26.3	68.1	26.3	38.4	99.5	15.1	39.1
Waterville village, Nassau County	13 060	13 871	15 342	4 561	4 764	4 448	5.2	2.0	5.2	2.0	2 106.5	5 441.7	733.2	1 894.2
Waterville village, Jefferson County	2 166	1 874	2 047	845	744	643	8.2	3.1	8.2	3.1	746.9	1 989.1	293.4	773.6
Waterville CDP, Jefferson County	5 218	5 485	5 901	2 221	2 150	2 032	9.8	3.8	9.8	3.8	689.0	1 739.3	284.7	740.3
Waterville CDP, Oswego County	1 825	1 715	1 697	1 436	1 218	778	151.7	58.6	149.9	57.9	186.2	480.3	86.2	224.8
Waterville town, Albany County	3 325	2 929	2 242	1 436	1 218	778	151.7	58.6	149.9	57.9	186.2	480.3	86.2	224.8
Waterville town, Oneida County	2 057	1 954	2 072	795	697	649	141.7	54.7	133.0	51.4	15.5	40.0	6.0	15.5
Waterville village, Chautauque County	3 451	3 446	3 451	1 443	1 447	1 447	9.9	3.8	9.9	3.8	348.6	908.2	145.8	379.7
Waterville town, Chautauque County	5 194	5 194	5 200	2 414	2 158	2 111	127.0	49.4	127.0	49.4	42.5	110.0	19.7	51.1
Waterville town, Oswego County	6 634	6 502	6 435	3 388	3 388	3 388	17.2	6.6	17.2	6.6	50.3	130.4	4.4	11.5
Waterville Falls CDP, Warren County	5 964	5 331	3 343	2 253	1 764	967	11.9	4.6	11.9	4.6	50.3	130.4	4.4	11.5
Waterville town, Suffolk County	2 129	2 774	1 156	1 486	1 438	614	38.4	14.8	38.4	14.8	50.3	130.4	4.4	11.5
Waterville town, Suffolk County	1 571	1 629	1 926	2 026	2 026	2 026	7.5	2.9	7.5	2.9	28.5	74.5	3.7	9.6
Waterville town, Suffolk County	9 183	9 181	8 558	3 281	2 920	2 442	4.0	1.5	4.0	1.5	2 285.8	6 172.0	370.3	956.3
Waterville CDP, Rockland County	17 689	18 536	20 375	5 992	6 061	5 876	7.1	2.8	6.9	2.7	2 285.8	6 172.0	370.3	956.3
Waterville CDP, Rockland County	5 849	6 071	6 071	1 993	1 901	1 901	12.8	5.0	12.8	5.0	457.0	1 169.8	155.7	398.6
Waterville CDP, Ulster County	2 252	2 382	1 977	977	849	849	10.6	4.1	10.6	4.1	212.5	549.3	92.2	238.3
Waterville CDP, Suffolk County	28 410	29 533	17 374	8 657	8 477	4 511	17.2	6.6	16.0	6.2	1 716.2	4 583.7	541.1	1 394.3
Waterville CDP, Albany County	6 750	6 881	6 364	3 018	2 702	2 064	8.2	3.2	8.2	3.2	83.2	2 109.4	368.0	949.1
Waterville town, Oswego County	4 993	3 482	2 535	2 017	1 230	837	99.8	38.5	87.3	33.7	50.3	130.4	4.4	11.5
Waterville town, Oswego County	5 737	5 458	5 093	2 017	1 733	1 392	111.8	43.2	111.7	43.1	51.4	133.1	18.7	48.8
Waterville CDP, Rockland County	3 437	8 553	5 510	1 118	2 489	1 427	7.5	2.9	7.5	2.9	458.3	1 185.2	149.1	385.5
Waterville CDP, Rockland County	1 750	1 750	1 750	727	695	671	17.5	6.7	17.5	6.7	101.7	261.2	42.3	108.5
Waterville CDP, Orange County	8 074	8 105	6 113	1 134	1 053	991	25.1	9.7	24.3	9.4	121.4	310.0	18.0	46.7
Waterville village, Essex County	5 539	5 539	5 539	331	315	291	2.6	1.0	2.6	1.0	207.3	539.0	127.3	331.0
Waterville town, Essex County	1 446	1 439	1 453	855	747	674	173.1	66.8	151.2	58.4	9.6	24.8	5.7	14.6
Waterville CDP, Rockland County	2 251	2 153	1 875	838	745	611	12.4	4.8	12.3	4.7	183.0	478.9	48.1	128.3
Waterville CDP, Rockland County	4 680	4 884	4 884	1 884	1 884	1 884	4.8	1.9	4.8	1.9	95.0	2 463.2	397.5	997.6
Waterville CDP, Erie County	47 866	51 210	48 404	17 807	16 663	13 535	55.4	21.4	55.4	21.4	864.0	2 235.7	331.6	832.1
Waterville town, Erie County	1 335	1 100	935	490	367	331	23.7	9.2	23.7	9.2	15.4	40.0	3.2	8.2
Waterville town, Livingston County	1 753	1 867	1 713	855	797	531	26.5	10.2	26.4	10.2	6.6	17.2	3.2	8.2
Waterville town, Livingston County	4 121	4 261	4 261	2 009	2 009	2 009	106.5	41.1	106.5	41.1	3.9	10.0	2.0	5.2
Waterville CDP, Steuben County	5 952	6 169	7 253	2 709	2 150	1 544	90.2	34.8	90.2	34.8	1 417.1	3 720.0	526.0	1 380.6
Waterville town, Oneida County	1 620	1 491	1 299	656	495	377	2.3	0.9	2.3	0.9	378.7	967.8	161.3	412.2
Waterville village, Herkimer County	871	979	1 018	371	377	339	2.3	0.9	2.3	0.9	378.7	967.8	161.3	412.2

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CENSUS '90



1990 Census of
Population and Housing
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